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No. 133

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3 October 1980

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WORLDWIDE AFFAIRS

BRIEFS

UGANDA-'TASS' AGREEMENT--An agreement between Uganda News Agency and TASS News Agency has been signed by the minister of information and broadcasting, Dr Anyoti, and the Soviet charge d'affaires, Mr Roman Lozhnikov. Under the agreement, engineers from TASS News Agency will come to train the staff of the Uganda News Agency in handling the machines provided to Uganda News Agency by TASS. Dr Anyoti hoped that the agreement will help to advance the standard of news coverage and the technical system of Uganda's mass media. The Soviet charge d'affaires, Mr Roman Lozhnikov, hoped that the exchange of information between the two agencies will assist in better presentation of the (true picture) of political, social and cultural events. [Text] [LD181280 Kampala International Service in English 1000 GMT 18 Sep 80]

FRENCH-IRAQI TRANSMITTERS AGREEMENT--This morning Culture and Information Minister Latif Nasif Jasim signed three agreements with a French company regarding implementation of the shortwave radio transmission station project in Balad and the country's western and eastern radio station projects with a capacity of 2,000 kw each. The projects, which will be completed in 22 months and carried out in two stages, are aimed at transmitting Baghdad and the voice of the masses radios to parts of the world that have not been receiving Iraqi radio broadcasts so far. The above-mentioned projects include radio transmitters that transmit on mediumwaves and shortwaves whose capacity range between 500 and 2,000 kw, aerials to be directed to all parts to the world, electrical generators, public works and installations, and instruments for direct control and supervision of the stations in the radio and television corporation building in Baghdad. These projects, which cost about \$4 million dinars, are among the radio coverage projects planned by the Ministry of Culture and Information. The signing ceremony was attended by the country undersecretary Taha Yassin 'Ali, director general of the radio and television general corporation Hamid Sa'id, the French ambassador in Baghdad and ministry officials. [Text] [CF161410 Baghdad International Service in Arabic 1000 GMT 16 Sep 80]

CSO: 5500

INTER-ASIAN AFFAIRS

COMMUNICATIONS CONFERENCE OPENS

Peshawar KYHBER MAIL in English 10 Sep 80 p 6

[Text]

NEW DELHI, Sept. 9: A four-day conference of communication specialists and administrators from South Asia opened in New Delhi yesterday.

Six countries including Pakistan and India are attending the conference. Additional Secretary of the Ministry of Information and Broadcasting Mr. Masood-ur-Rauf and Mr. Allah Bakhsh Rajput, Managing Editor of Pakistan Feature Service Karachi are representing Pakistan.

The conference will discuss report of Macbride Commission appointed by the Director General of UNESCO to review the problems of communication in contemporary society in the context of technological advances and recent developments in in-

ternational relations.

Significance is being attached to Delhi conference since it is preceding the UNESCO conference being held in Belgrade later this month where the report would be discussed in detail.

Opening the conference in New Delhi the Indian Minister for Information and Broadcasting said the task ahead were two-fold—Firstly to develop and expand media and information capabilities within our own countries and secondary endeavour to remove imbalances in access to information, education and entertainment activities. The second objective, he said, has to be achieved through international cooperation without sacrificing national dignity and honour.—A.P.P.

CSQ: 5599

INTER-ASIAN AFFAIRS

BRIEFS

INDONESIA-THAI SATELLITE ACCORD--Jakarta, 17 Sep (AFP)--An agreement on expanded use of the Indonesian Palapa satellite by Thailand was signed here today between telecommunication authorities of the two countries. The agreement, signed by Thailand's Director-General of Post and Telegraph Maj Gen Suchat Phuaksakon and PERUMTEL (Telecommunication Corporation) Executive Budi Santoso for Indonesia, provides for Thai use of an additional 13 transponder channel units for a five-year period. [Text] [BK181239 Hong Kong AFP in English 1646 GMT 17 Sep 80]

CSO: 5500

PTT MINISTER SAYS DOMESTIC SATELLITE SYSTEM PLANNED

Dacca THE BANGLADESH OBSERVER in English 11 Jul 80 p 12

[Text] Mr Mayeedul Islam, Minister for Posts, Telegraphs and Telephones, said that domestic satellite system will be introduced in the country within the first phase of the Second Five-year Plan.

Laying the foundation stone of the second satellite earth station at Kalia-koir, thirty miles off the Metropolis on Thursday, he said that with the commissioning of the new B-type satellite earth station the horizon of country's telecommunication network would be improved greatly raising the standard to that of the developed countries of the world.

Mr Mayeedul Islam said that the new satellite station would facilitate maintenance of an uninterrupted telecommunication link with the neighbouring countries and outside world with which Bangladesh cannot keep communication through the Betbunia satellite earth station. The Minister added that scheme has taken for remodification and modernisation of the Betbunia station.

He said that the cost of setting up of second satellite station would be about Taka 9 crore and to be completed by February next year. The government's decision for introducing domestic satellite system is to improve the country's internal telecommunication facilities, television viewing and radio programme, the Minister observed. Mr Mayeedul Islam also mentioned that this decision had taken in view of the cost of such project had remarkably decreased in the recent times. He informed that steps have also been taken to improve the microwave system in the country with a view to maintaining better telecommunication link with the outside world.

He called upon the engineers and technicians of the T&T Board to work with a missionary zeal and sincerity to implement the project within the schedule.

Giving an account of the performance of T&T Board, the Minister asserted that the revenue earnings of the Board has been increased substantially

in recent times although there were about 300 complaints of inflated telephone bills. The complaints are now under proper investigation, he added.

The function was also addressed among others, by Mr A. M. Ahsanullah, Secretary Ministry of P.T. & T., Mr A. B. M. Taher, Chairman, T & T Board and Mr Moqsood Ali Khan, Member (Pistning) T & T Board. [as published]

CSO: 5500

SPACE COMMISSION MEMBER OUTLINES FUTURE PROGRAM

Calcutta THE STATESMAN in English 2 Jul 80 p 3

[Text]

DR Brahm Prakash, member of Space Commission of India, said in Calcutta on Tuesday that the SLV Experimental II, a satellite launch vehicle, would be sent off from Sriharikota in the third week of July. The SLV Experimental I had failed because of a technical defect in August last year.

Dr Brahm Prakash, who inaugurated a space exhibition at the Birla Industrial and Technological Museum during the day, explained that the experimental satellites were an important part of SLV-3 project of India's space programme. The rockets were launched in to space to determine the technical capabilities of launching satellites. The SLV Experimental I had failed because of some mechanical defect in the second stage of the rocket. Nitrogen stored in it had leaked out. As a result, its reaction with hydrogen, important to guide the path of the rocket, did not take place and the rocket fell into the sea.

The defective system was tested at Thumba, and by June 18 it had been corrected. Dr Brahm Prakash said. It was hoped that the SLV Experimental II would be successfully launched into orbit. If the experimental vehicle could be launched successfully, the next programme was to send off the D-1, a launching vehicle with a payload of 40 kg which might take another year.

Outlining the future space programme of India, Dr Brahm Prakash said that a proposal to build an Advanced Satellite Launch Ve-

hicle, capable of carrying a payload of 150 kg was being considered by the Central Government. Much importance was being attached to the construction of Remote Sensing Satellites that could perform a number of remote sensing experiments important for scientific and economic development. Such satellites could provide useful information on flood control, changes of sea lines and estimates of agricultural production. There was also a scheme to build (Poli) satellites, that could go up 1,000 km in space and carry over 500 kg of payload. These satellites were not geo-stationary.

Dr Brahm Prakash said that though efforts were being made by the Indian Space Research Organization to build the essential equipment for launching rockets and satellites indigenously, not enough "space-worthy" material was available in India. He explained that the electronic equipment needed for rockets and satellites had to be of a very high quality. For once a rocket was launched, nothing could be done to rectify any technical defect. He added that such special space-quality material were not made in India in adequate quantity.

The exhibition, organized jointly by the Indian Space Research Organization and the Birla Industrial and Technological Museum, will be open till July 20. It displays models of sounding rockets, satellites and satellite-launching vehicles, including the SLV-3, a model of Aryabhata and a model of Rohini satellite.

SPACE DEPARTMENT PLANS REMOTE SENSING SATELLITE

New Delhi PATRIOT in English 11 Jul 80 p 5

[Text] The Department of Space is planning the development of the required technology and facilities for its major programme of building an Indian Remote Sensing Satellite (IRS), reports UNI.

The satellite is to be launched during 1984-85, and plans are under way for finalisation of the system configuration.

The department held discussions with a number of user Ministries and State Governments.

The IRS will be built to meet the requirements of these users and the need of resource managers in various disciplines. It is considered the first major step towards achieving one of its main programme goals, space-based remote sensing for resources management.

Preliminary analysis indicates that a 732-km sun-synchronous near-polar orbit and a two-year operational life will meet most of payloads on the first IRS are likely to be a six-channel Multi-Spectral Scanner (MSS) and a two channel liner imaging self-scanning system.

The IRS will be a 600-kg body-stabilised satellite with deployable solar panels. Detailed configuration of the various sub-systems is in various stages of definition, according to the annual report of the Department of Space for 1979-80.

The computer design of the telescope for the IRS MSS is nearly complete. Data product techniques are also being studied.

Meanwhile, the meteorological experiments carried out by Bhaskara has provided valuable insights into the meteorology over the Bay of Bengal and Arabian Sea, according to an analysis of the data.

The data gathered from Samir (microwave radio-meter) of Bhaskara are providing information on ocean surface temperature, ocean winds and various

meteorological parameters such as atmospheric moisture content on a continuous basis.

The indigenously developed solar cells supplied by the Bhabha Atomic Research Centre (BARC) and Solid State Physics Laboratory (SSPL) have performed satisfactorily in the space environment.

Date: Year:

SATELLITE READY FOR SHIPMENT TO FRANCE

Bombay THE TIMES OF INDIA in English 30 Jun 80 p 13

[Text] Bangalore, June 29 (PTI): The Ariane passenger payload experiment (APPLE), which will be used for conducting communications experiments, has successfully undergone two final tests at the Indian space research organisation (ISRO) satellite centre at Peenya near here.

The APPLE, scheduled to be launched by the Ariane launch vehicle of the European space agency in November this year, is now ready to be moved to France next month.

According to the original schedule, APPLE was to be moved from here on June 5, and to be lifted off from Kourou in French Guiana on November 7. Apparently there is some delay in taking off.

French Tests

"We are waiting for the final communication from the European space agency (ESA) for moving APPLE from here," Dr. R. N. Vasagam, APPLE project director, said here today.

In Toulouse in France, APPLE will undergo acceptance tests along with two other payloads allotted to make up Ariane's third developmental flight (La 3), before finally journeying to Kourou.

APPLE, which will operate in a geostationary orbit, will have the capability to transfer itself to a geostationary orbit from a parking orbit where it will be placed by the Ariane launch vehicle.

The project is a major step towards using the latest technology of modular spacecraft structure with three-axis body stabilisation.

The satellite will carry two C-band transponders in the 4/6 GHz range which will be used for conducting communication experiments.

CSO: 5500

BRIEFS

SPACECRAFT MECHANISMS MANUFACTURED--Indian space scientists have established the country's component for indigenously manufacturing and fabricating highly sophisticated spacecraft mechanisms and devices. The devices and mechanisms fitted in the Indian satellites Bhaskara and Rohini have already proved their worthiness. Indigenous fabrication of these devices will help save several million of rupees in foreign exchange. [Text] [BK170935 Delhi Domestic Service in English 0830 GMT 17 Sep 80]

TV NETWORK--The TV network will cover an area of over 485,000 square kilometers during the current plan period. New TV centers will be opened at Ahmedabad, Bangalore and Trivandrum. This was disclosed by Minister of State for Information and Broadcasting Mrs Ram Dulari Sinha while addressing the TV program producers guild in Calcutta on 12 September. [Text] [BK131527 Delhi Domestic Service in English 1230 GMT 12 Sep 80]

TRANSMITTER STRENGTH BOOSTED--Minister of State for Information and Broadcast Mrs Ram Dulari Sinha has said that a 200-kilowatt transmitter will replace the 20 kilowatt transmitter at Siliguri in north Bengal. This will make the all India radio program accessible even to the border and remote areas. She was speaking at a news conference in Calcutta today. [Text] [BK131621 Delhi Domestic Service in English 1530 GMT 13 Sep 80]

SUCCESS IN REMOTE SENSING--India has made a breakthrough in remote sensing by interpreting satellite pictures. Indian scientists have carried out the first ever study of snowfall conditions in the Himalayas with the help of these pictures. The job is being handled by the national remote sensing agency, Secunderabad. [Text] [BK160335 Delhi Domestic Service in English 0240 GMT 16 Sep 80]

SATELLITE IN ORBIT 500-600 DAYS--Rohini RS01, which was shot into the orbit from the Sriharikota range in July last, is likely to stay up for at least 500 to 600 days, according to the latest analysis of the orbit data. This was disclosed by the Indian Space Research Organization sources today. RS01 had completed 870 orbits till today and all its components were working satisfactorily. The spin weight of the satellite was coming down as expected, the sources added. [Text] [BK131029 Delhi General Overseas Service in English 1000 GMT 13 Sep 80]

COMMUNICATIONS SATELLITE DELAY--Cochin, June 29. The INSAT (Indian National Satellite) communications satellite would be launched only around March 1982, the Union Communications Minister, Mr. C. M. Stephen, said here on Saturday. Answering pressmen's questions he said the delay was caused by reported inability of the U.S. manufacturer to procure certain items of equipment in time. Mr. Stephen said a special effort was under way to improve the quality of postal and telecommunication services. Supervisory failures was one reason for the deterioration in the quality of service, he said in reply to a question. He said the period 1974-80, had seen tremendous expansion of postal and telecommunication services, without much attention being paid to the quality. Now there would be a year of consolidation and defects would be identified and rectified, he added. [As published] [Text] [Madras THE HINDU in English 30 Jun 80 p 11]

CSD: N/uo

SUBMARINE CABLE LINKS EAST, WEST MALAYSIA

Kuala Lumpur BUSINESS TIMES in English 25 Aug 80 p 1

[Text]

A \$64 million undersea cable link between Peninsular Malaysia and Sabah and Sarawak to be opened next week will enhance telecommunication facilities in the country.

From next Sunday, telephone users in both these areas will be able to dial direct to one another through the new submarine cable link between Kuantan and Kuching, the first domestic undersea cable project.

The cable system which has a capacity of 1,300 telephone lines has a useful life of 25 years, according to a government statement yesterday.

Although essentially a domestic system, it has provisions for future tele-

communications links between Peninsular Malaysia and the Philippines as well as Kalimantan.

This new communications system between the two parts of the nation is in addition to the 48-channel Johor Bahru-Kuching tropospheric scatter system, the 72-channel Kuantan-Kota Kinabalu domestic satellite system and the 18-channel Singapore-Kota Kinabalu Seacom cable link.

The new system is the first domestic undersea cable project, although there is already the Commonwealth submarine cable project in the South China Sea (Seacom) with its station at Kota Kinabalu.

The statement said the

terminal cable stations for the new system are at Cherating, 42.5 km (27 miles) north of Kuantan, built at a cost of \$1.2 million, and at Sematan, 112.7 km (70 miles) from Kuching in the First Division, costing \$1.5 million.

Work on the project began in September last year and the cable was laid by a ship from Japan, KDD Maru.

The distance between the Cherating and Sematan stations is 543 km (336 miles) but the cable length is longer to conform with submarine contours and to facilitate the cable being lifted for repairs.

The 7.6 cm (3 inches) diameter cable is buried one metre (3.3 ft) deep.

According to the

statement, plans for the project began in 1970, and geological studies for suitable locations for the terminal stations were carried out in 1976.

In 1977, submarine cable traffic studies were conducted by the Japan International Co-Operation Agency as part of the Japanese government's technical assistance to the Malaysian government.

To mark the commissioning of the submarine link-up, the Postal Services Department will issue three commemorative postage stamps and first day covers.

The stamps will be of 10 cents, 15 cents and 50 cents denominations. — Bernama

CSO: 5500

PAKISTAN

BRIEFS

BALUCHISTAN COMMUNICATIONS TO IMPROVE--A comprehensive program has begun to improve communications in the Baluchistan area after consultations with elected representatives from the area. This was stated by the director general of the development institute for northern areas in Skardu while inaugurating the Khurbi bridge. He said the government is giving full attention to the development of the area, especially in the communications sector. He said work will begin on a new 10-kw-capacity broadcasting house in Skardu by the end of this month. [Text] [GF151747 Karachi Domestic Service in Urdu 1500 GMT 15 Sep 80]

CSO: 5500

BRIEFS

XINJIANG RADIO, TELEVISION NETWORK--A new development has been made in radio and television broadcasting in Xinjiang Uygur Autonomous Region. A region-wide radio network has been formed, featuring programs in Uygur, Han, Kazak and Mongolian languages. In the Urumqi area, television programs are aired in Uygur and Han languages. Broadcasting stations have been set up in every county and farm in Xinjiang, and amplification stations have been set up in the communes where 1 million loudspeakers have been installed. [OW180649 Beijing Domestic Service in Mandarin 0900 GMT 11 Sep 80]

CSO: 3500

SECOND LEG OF ASEAN SUBMARINE CABLE INAUGURATED

Kuala Lumpur BUSINESS TIMES in English 9 Aug 80 p 1

[Text]

SINGAPORE, Aug. 8 — THE Indonesia-Singapore submarine cable network, the second leg of the system linking the Asian countries, was officially inaugurated today.

To mark the occasion, Singapore's Communications Minister, Mr Ong Teng Cheong, spoke to his Indonesian counterpart, Mr Rosmin Nurjadin, with an IDD (international direct dialling) telephone call.

The US\$80 million cable stretches over 570 nautical miles of water between Singapore and Jakarta. It has a capacity to carry 480 channels of traffic, including telephone, telex, telegraph and data.

The cable, built by Nippon Electric of Japan, was completed on April 1, almost three years after the two countries signed

a memorandum of understanding in July 1977.

Paratel of Indonesia is the major shareholder in the network with 60 per cent ownership, while Telecoms of Singapore owns 33 per cent. Malaysia, Thailand and Philippines, the three other Asian countries, also hold small shares, as also Overseas Telecoms of Australia, KDD of Japan and Cable and Wireless of Hong Kong.

This is the second network in the ambitious Asian circuit plan to link up the five countries.

The Singapore-Philippines link has been in operation for two years.

Singapore and Thailand last month signed a memorandum of understanding for a submarine cable linking the two countries, in which Malaysia is also expected to participate. —

AFP

THAILAND

BRIEFS

RADIO STATION IN PHATTHALUNG--Today Minister attached to the Prime Minister's Office Someak Chuto opened the radio station in Phatthalung under controls of Radio Thailand. The station cost 3.4 million baht to build and is located in the central district of Phatthalung. The station has 10-kilowatt transmission power and the station's programs could reach areas up to 70 km away. (BK301147 Bangkok Domestic Service in Thai 1300 GMT 24 Aug 80 BK)

CSO: 5500

ACQUISITION OF TELEVISION FROM SPACE DISCUSSED

Hanoi KHOA HOC VA DOI SONG in Vietnamese 1 Aug 80 pp 2,3

[Article by Tran Hoang Luong, of the Space Communications Research Subcommittee: "Television from Space"]

[Text] The transmission of topical pictures from a place to another and the transmission of the picture of the other side of the moon from the universe space to the earth by covering a distance of over 400,000 kms represent a progress in the [still] picture transmission technique. Though difficult, this process is simpler than the transmission of motion pictures.

Thanks to telescopes, man has been able to observe the sky and celestial bodies within a fixed scope. Since the successful launching of artificial satellites and along with the progress made in the color and black-and-white television technique, man has embarked on television from space. Pictures have reached us from space to small screens and from the surface of the earth to astronauts aboard spacecraft.

Television Signals

Sound transmission signals are very simple because only voices and music are transmitted within a frequency range of 20 to 15,000 Hz. During the broadcast, apart from the audio signals, high-frequency signals are also used to transmit sounds and they range from 100 kHz to 30 MHz. If microwaves are used to transmit many talk channels, the carrier frequency may range up to billions of hertz.

Television signals are much more complex and are mainly composed of:

--Picture signals: These represent the black-and-white or color dots of the picture to be transmitted, with a scanning frequency of 15,625 Hz--that is, scanning 625 lines for a picture--and a vertical scanning frequency of 50 Hz--that is, producing 50 fields per second (according to OIRT and CCIR).

--Synchronization signals: The pulses synchronize the horizontal and vertical scanings to stabilize the picture and prevent it from flickering.

--Accompanying sound [audio] signals.

The composite name for picture signal and synchronization signal is video frequency signal or simply video signal. The video signal and the audio signal are separately processed by a picture carrier and a sound carrier respectively.

Since the picture and sound signals occupy a rather wide frequency band of 6 to 8 MHz, the picture and sound carrier frequencies are fairly high--from 48.5 to 230 MHz--and are divided into 12 channels. The wave transmission within this frequency range is performed according to the direct line-of-sight, point-to-point method, without the electromagnetic waves being blocked by any obstacle, and the wave transmission scope of a television station usually has a radius of less than 50 kms. If antennas are used for transmission from a higher position such as the Tam Dao wave transmission station, the service scope may be expanded.

Wave transmission through space is effected according to the straight-path method. The satellite hovering in space must see the earth station and vice versa. If relay from the space station through the satellite to the earth station is necessary, the space station must see the satellite which, in turn, must see the earth station but the space and earth stations may not see each other.

In industrial television, when it is necessary to observe small objects with high precision, it is sometimes necessary to increase the number of scanning lines to more than 625 and to use special cameras and television receivers.

In space television, it is possible to use both industrial and general televisions according to the topic to be transmitted and the target to be serviced. For example, it was possible to transmit the activities of Lunakhot and the astronauts according to the OIRT common standards to serve the broad masses in the socialist camp and to enable them to conveniently follow these activities.

The processing of picture and sound signals [in space television] is somewhat different from that in general television.

In general television, video signals are processed by amplitude modulation while in space television frequency modulation is used to heighten the signal-to-noise ratio and the degree of trustworthiness when signals are to be transmitted over a very long distance of tens of thousands of kilometers and not within a range of only 50 to 100 kms as from a television transmitter to television receivers.

In addition, various processing methods by pulse [xung max] amplification and single amplitude modulation of video signals are used.

The "Lotus" (Hoa Sen) Earth Station processes picture signals by frequency modulation and the wave carrying the picture to be transmitted is 3,875 MHz; the sound signals are processed according to the subcarrier frequency so that the reception of pictures and the accompanying sounds must be regulated by the earth station of the Dubna Center in the Soviet Union through the medium of earth stationary orbit (dqia) tinhx) Satellite Horizon 53 located above the Indian Ocean. Pictures transmitted from space go through the Dubna Control Center. The Moscow Central Television Station and the Dubna Center Station process these pictures and transmit them through the satellite to the "Lotus" Station in order to ensure uniformity of video transmission and processing formulas.

Picture Reception and Transmission in Space

Generally speaking, the method of receiving and transmitting pictures in space is theoretically similar to that used on the surface of the earth but differs in the sense that equipment is more specialized to conform to rigorous space conditions and that technical standards are more strict and involve appropriate processing and modulation formulas in order to ensure stability, trustworthiness and high quality of picture transmission.

Camera control may be assumed by the astronauts or preprogrammed or remotely and electronically effected within the spacecraft or from the earth surface. The video and audio signals picked up by the camera are conveyed to and processed by the transmitter in the spacecraft and then transmitted to the earth. Since the spacecraft equipment is compact, lightweight and precise and consume little energy, its output is usually small. For this reason, the signals reaching the earth surface are usually very weak--even weaker than the internal noise in the receiver--and cannot be picked up by ordinary amplifying conductors. This is because an important norm for reception is that the signal-to-noise ratio must reach a certain level and the higher this is, the better. To overcome this difficulty, large-diameter parabolic antennas with a high-boosting coefficient are used together with multiplexing (tham soos) amplifiers.

Conversely, when transmission is effected from the earth surface, the transmitter can have a high output so that the space station antennas--despite their small size and low-boosting coefficient--may pick up signals.

To follow up the astronauts' activities, cameras are placed in the spacecraft to pick up pictures and voices which are then beamed to the earth by transmitters. Transmission to the earth may be effected immediately if the earth station is located within the beaming scope of the space station [transmitter]--that is, if the two stations see each other. To prevent interruption of transmission when the sight of either station is blocked by any obstacle, video recorders are used to record pictures which will later be transmitted to the earth when conditions are favorable for wave transmission.

Two-way transmission of pictures is possible as in the case of televised press conferences or talks.

Usually, pictures from space (of the spacecraft interior, of the moon and other planets and so forth) are transmitted to the earth station of the control center where, after processing, they will be relayed to the satellite and hence retransmitted to other ground stations. At these ground stations, the video signals received will be conveyed to the television center and broadcast to the network of television receivers in the country. If the distance from space is too long, it is possible to use the space station or satellite as a relay station to transmit signals to the earth station of the control center.

In short, to effect two-way television between two points in space or on the surface of the earth, there must be the same television standards, the same video and audio processing formulas and appropriate transmission and reception frequencies.

9332

CSO: 5500

MULTINATIONAL COMPUTER PRODUCTION VIEWED AS THREAT

National Manufacturers Alarmed

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 20 Aug 80 p 27

[Text] The permission granted by the Special Data Secretariat (SEI) for multinational companies to produce medium-sized computers in Brazil created great alarm among the officials of COBRA [Brazilian Computers Inc.], which is a state capital corporation and the main national corporation in the sector. In a meeting attended by the president of the Association of COBRA Employees, Luis Fernando Seibel; the president of the Association of Data Processing Professionals of Rio, Marilia Millan; the director of the Engineers Club, Frederico Novaes, and the representative of the state employees, Fernando Alzuguir, the conclusion was reached that the SEI decisions seriously threaten national plans in the area of computation and will harm all planning of coming sales of the medium-sized products such as the Cobra-500, with the buyers waiting instead for competing computers from foreign companies.

Luis Fernando Seibel even said that the enthusiasm of COBRA because of the launching within a month of the Cobra-500, the great new item in the area of medium-sized computers, has been erased because the market is going to wait for the foreign competitor, whose price could be worth waiting for.

"The price of the IBM medium-sized computers is going to drive the market of small computers down. They are going to offer a more sophisticated product for a price, shall we say, which is one-third greater but with a greater capability, even doubling the number of megabytes," said Marilia Millan.

The representatives of the workers of the computer sector also concluded that the end of restrictions to the entry of multinational companies into the area of medium-sized computers may accelerate the deactivation of the system of distributed process, which uses smaller computers and favors the industry of peripheral products, and favor the centralized system Network Architecture, the principal characteristic of equipment produced by IBM.

"We are practically witnessing the end of the preservation of markets," said Fernando Alzugair of the Cobra Hardware Department. "Actually, we are not satisfied with the assurances of SEI with respect to the period of up to 1984 before the multinationals can manufacture these products. What is simply going to happen is that IBM will replace obsolete equipment with the newest equipment--in this case the 4331 MC-2--it will resell the old machines cheaply to new customers and then practically reshape the market to its own ideas."

The representatives of the worker associations also emphasized the degree of development of the national computer industry obtained in a relatively short time, recalling that the national companies signed agreements with foreign industries of small size for the development of technology and to fight the power of IBM. As an example they cited the CORRA-ITCOM (Canadian); the LABO-NIXDORF (Germany); the EDISA-FUJITSU (Japanese) and the SIE-LOBAX (French) agreements.

The director of the Engineers Club, Frederico Novaes, also believed the permissions to build microcomputers granted to Hewlett-Packard, to Burroughs for its 6900, and even for the manufacture of magnetic disks, to be serious.

According to the representatives of the worker organizations of the computer sector, the new SEI policy is short-sighted and money oriented, benefitting only the immediate interests of the buyers without giving due attention to the key moment of development of the national industry, which would only need a few more years to reach its maturity.

Burroughs Approves Policy

Rio de Janeiro JORNAL DO BRASIL in Portuguese 15 Aug 80 p 19

[That] Sao Paulo--"Protection is one thing, prohibition is another. I support the former but the latter displeases me," said the president of Burroughs, Mr Henry Eicher yesterday on the possibility of a policy for data processing which insures the development of national industry without interfering with the multinational company.

As far as he is concerned, the approval of the IBM project "was a positive step" and does not mean that the SEI is favoring that company to the detriment of Burroughs. "We are updating a medium-sized computer project and I hope that its reception by SEI will be good," he emphasized.

Rejected Plans

Mr Eicher said that Burroughs invested \$80 million in plans not approved by the government and they would increase their exports by \$60 million

in 3 years. "Burroughs could contribute much more to data processing in Brazil," he said, recalling that the company has idle capital and industrial capacity.

He made an 18-minute impromptu speech to nearly 400 businessmen of the sector at the Buffet Colonial and said that the lack of computers in the country "leaves you, the users, in a dramatic position at that moment because since you cannot import them you are left without any options."

The president of Burroughs, seeking to characterize the complexity of the data sector in the world, made some comparisons on the use of computers in various countries with their GNP. His objective was to show that due to its complexity, it would be more important to have a greater freedom for the sector.

He pointed out, for example, the time it takes to build a computer, which from research to sales takes periods of between 10 and 20 years; the amount of capital and human resources required and the production levels of some developed countries. England produces 34 percent of what it uses in data; France, 7.7 percent; West Germany, 17 percent (Siemens alone produces 14 percent of what is consumed in the country); Japan, 33 percent and the United States, 100 percent of its needs.

After

Mr. Eicher made a recapitulation of the protective measures for the sector, ranging from the Actions of CAPRE [Electronic Data Processing Activities Coordinating Commission], which "as of 1973 required the appraisal of all imports." He added that later on it "established such a reservation of markets that imports became progressively smaller." In his opinion, that reserving of the market "has grown to such a point that it has reached unthought of areas."

The president of Burroughs said that at this time some users are using computers no longer being used abroad and that other machines are in no condition to receive programed software with the result that "all that means very high costs."

In view of that picture resulting from restrictions on imports, Mr. Eicher forwarded a suggestion to the users. They should not wear themselves out or overload the SEI with presentations of projects repeatedly and individually."

He suggested that SUCESU--Association of Users of Computers and Sub-equipment, Equipment--gather all requests by users and then send them on to the SEI. "It would be more rational and would guarantee the establishment of a real framework which could lead to fairer or at least more adequate solutions."

Mr. Arthur Warner believes the approval of the IBM project by SEI to be positive and he said that in dealing with the affair the least important thing was the citing of the names of the companies.

ATLANTIC SUBMARINE CABLE INSTALLATION CONTRACT SIGNED

Negotiations Explained

Rio de Janeiro U GLOBU in Portuguese 21 Aug 80 p 21

[Text] Salvador (U GLOBU)--Telecommunications company representatives from 10 Latin American countries, Africa and Europe will sign a contract valued at \$250 million tomorrow in Salvador for the installation of submarine cables which will link Brazil to Europe, passing through Africa. The ceremony will be attended by Minister of Communications Haroldo Correa de Mello and Argentine Secretary of State for Communications Eduardo Corrado.

The announcement was made yesterday by Helvecio Gilson, president of EMBRATEL [Brazilian Telecommunications Company] and TELEBRASIL [Brazilian Telecommunications]. The members of TELEBRASIL, a state telecommunications corporation, and private companies of the news media are holding their second discussion today in Salvador on the subject of "Rural Telephones." The first was on violence and held in Santa Catarina.

Atlantic Cable

Negotiations for the installation of the Atlantic Cable, crossing the Atlantic, began in 1976 and concluded in 1979 when there was already an outline of the makeup of the consortium which would do the work and the initial establishment of the share of each participating country.

Brazil holds the chairmanship of the General Committee of the Atlantic Cable System and is represented by EMBRATEL. Brazil also has the largest share: \$250 million, which is 28.65 percent of the total.

The Atlantic Cable System has two sections: to the south it runs from Recife to Dakar in Africa, measuring 3,430 kilometers and having 1,380 telephone circuits. To the north it runs from Dakar to Lagos in Portugal, measures 2,930 kilometers and carries 2,580 telephone circuits.

According to Helvécio Gilson, installation of the Atlantis Cable is important from the economic, political and operational point of view. It is going to allow a greater communication between Brasil and Africa, consolidating political and economic relations, in addition to opening greater prospects for trade with Europe. Brazilian communications with Europe now are accomplished by means of 613 satellite channels and the Bradan-1 submarine cable, which runs to the Canary Islands and has 152 telephone circuits. It has already reached the saturation phase since Brasil's international telephone traffic is growing at the rate of 10 percent per year.

The president of IMBRATEL also pointed out the importance of the system from the point of view of reliability since Brasil cannot remain dependent on only one means of communications, in this case the Intelsat satellite system. The members of the consortium for the Atlantis Cable System are: Senegal, Ivory Coast, Brasil, Argentina, Great Britain, Portugal, France, West Germany, Switzerland and Italy.

Cable Contract Signed

Rio de Janeiro O GLOBO in Portuguese 23 Aug 80 p 20

[Text] Salvador (O GLOBO)--Yesterday, Minister Haroldo Correia de Matos, together with representatives of nine other country's members of the international consortium Atlantis Submarine Cable System, signed two contracts for the purchase of cables in the amount of \$250 million. The cables are for linking telecommunications of Europe, Africa and South America with the alternative system via satellite.

Negotiations involve the French companies Lee Cables of Lyon and Cit-Alcatel and the British Standard Telephone and Cables. Brasil is chairman of the consortium (made up of Brasil, Argentine, Senegal, Ivory Coast, Portugal, France, West Germany, Great Britain and Switzerland) and has the majority share in the investment \$71.6 million (3.9 billion cruzeiros), which amounts to 28.65 percent of the total.

Reliability of Cable Explained

Rio de Janeiro O GLOBO in Portuguese 23 Aug 80 p 20

[Text] Salvador (O GLOBO)--The president of TELEBRAS [Brazilian Telecommunications Corporation], Antonio de Alencastro Silva, said yesterday after signing the contract for the installation of the Atlantis Submarine Cable System with representatives of 10 countries, that this system despite being technologically less developed than the satellites gives a much greater margin of reliability. That is the reason Brasil is opting for it in the actual telecommunications expansion phase.

"In telecommunications the main concern is reliability, which may be obtained in two different ways: alternative routes or alternative systems.

"Today, technology, as Minister Haroldo Matos said in his speech, has evolved in such a way that the cost of submarine cables came down at a ratio of 10 to one with respect to previous costs," continued Alencastro, "if we consider the durability and cost of usage, it is comparable to that of the satellite system, therefore, the interconnection by means of cables is being developed, not only by Brazil but by the entire world, as an alternative which is economically valid and technically reliable."

Alencastro declared that the TELEBRAS goal is to have 7.7 million telephones in operation in the country by the end of the year.

By 1981 the Secretariat of Planning of the Presidency of the Republic (SEPLAN) has already decided that the telecommunications sector will be the least discriminated against and that a large part of the money of the National Telecommunications Fund (FNT) will be allocated to that sector.

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CSO: 5500

BRAZIL

BRIEFS

NEW RADIO STATION--The president of the Brazilian Radio Broadcasting Company today inaugurated a Radio Nacional station in Cruzeiro do Sul. [PY123127 Brasilia Domestic Service in Portuguese 2200 GMT 12 Sep 80]

CNO: 5500

NETWORK OF RADIO STATIONS TO SERVE PROVINCES

Cairo AL-AHRAM in Arabic 19 Jul 80 p 6

[Article by Mustafa al-Damrani: "Broadcasting System To Cover Every Spot on the Map of Egypt"]

[Text] For the first time in Egypt, 16 regional radio stations will be constructed to cover all governorates of the republic [see map on following page]. The construction of 10 stations will start by the end of this year, and will take 5 years to complete. This will strengthen the role played by these stations in furthering comprehensive development in the regions, in keeping with the total independence which President al-Sadat has given to the various provinces.

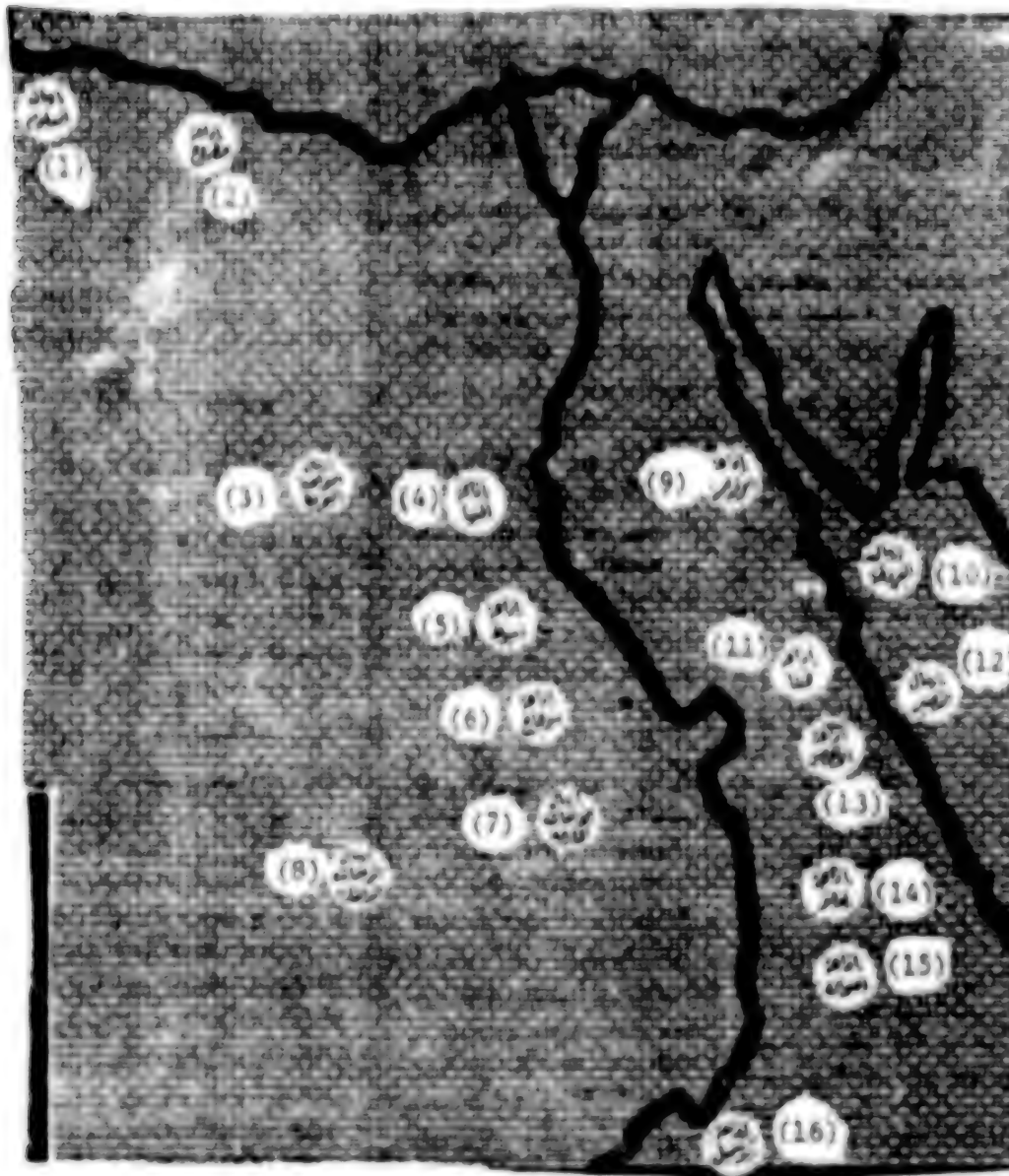
What is the full story of these stations and the methods of financing them? What are the construction priorities, and will each governorate have a regional station, or will there be a regional station for more than one governorate?

Also, what is the connection between these stations and the mother station in Cairo? And what programs will these stations carry compared with the programs presented by the Cairo station?

Safwat al-Sharif, chairman of the board of directors of the Radio and Television System, says that "in light of the directives of President al-Sadat on strengthening broadcasting so that the voice of Egypt will reach the most remote village and hamlet, we decided to plan that our regional radio stations should have two objectives. First, they would be relay stations to help strengthen transmission, so that the mother station could reach far places of the countryside. At the same time, there would be regional stations reflecting the activities of the region, promoting its daily life and helping to achieve its progress. We will, therefore, have saved time by accomplishing two objectives simultaneously."

Safwat al-Sharif goes on to say: "The new plan of action which is now under way involves the construction of 16 regional stations, 10 of which will be built over the next 5 years."

[Map of Planned Network of Regional Radio Stations]



Key:

- | | | |
|----------------|----------------------|----------------|
| 1. Al-Sailun | 6. Sawhaj | 11. Qina |
| 2. Matruh | 7. Al-Kharijah | 12. Al-Qusayr |
| 3. Al-Bahriyah | Oases | 13. Luxor |
| Oasis | 8. Al-Dakhilah Oases | 14. Idfu |
| 4. Al-Minya | 9. Red Sea | 15. Aswan |
| 5. Assiut | 10. Al-Ghardaqa | 16. Abu Sunbul |

With regard to the sites of these stations, the plan includes both Upper and Lower Egypt. Opportunity in Upper Egypt with regard to the construction of these stations is great, because work is now under way on strengthening the stations which transmit the General Program, the Koran and the People Program. This provides an opportunity to utilize [unused resources] after the strengthening operation is completed in the construction of the regional stations in Upper Egypt."

The chairman of the board has sent urgent letters to all governors in the republic on taking the initiative in serving the national and regional objective of constructing regional stations by setting aside the necessary land for these stations. The letter contains their construction, stating that the land should not be more than 5 km from the center of the provincial city, and should be a good site which would facilitate hooking up public utilities.

The system will send teams of radio engineering experts to the governorates which hasten to respond to the chairman of the board and which want a regional station in their province. The team will inspect the site, judge its suitability and draft the designs for the new station. It will then submit its report to the chairman of the board of directors on the suitability of the site, so that a start can be made in arrangements for implementation. A timetable will be laid down for installation of the antennas for these stations.

The system will install the equipment required for construction of the station after approving the decision of the team on the suitability of the site for construction of a regional station in the governorate. Priority will be given to the governorate which is most responsive to the chairman of the board of directors.

Increasing the Independence of Local Government

Safwat al-Sharif says: "Establishment of these stations will serve a specific philosophy ultimately aimed at accomplishing the hopes of the president about the independent character of local government and the achievement of comprehensive regional development. This philosophy has now become clear in the reorganization of the state, since the president has given the governors all necessary powers and resources of the governorates, so as to marshal all their capabilities toward reconstruction and prosperity in the climate of democracy presently enjoyed by the country."

With regard to the nature of these stations, Safwat al-Sharif says: "They will not be central stations in the usual sense of the term, but will be a product of the environment, addressing themselves to local society and the various segments of the populace in a manner adapted to their culture, customs, traditions and the nature of local work. These stations will differ from one governorate to another, from an agricultural governorate to an industrial governorate, from a governorate with a high educational

level to one where there is a great deal of illiteracy, from a society where women use makeup to one where they are still veiled, and from a society with a high artistic level to one which has an illustrious historic cultural background.

These stations will be characterized by their ability to adapt themselves to the society of the region--stations of a new type which do not carry a one-sided media message, but are able to communicate with the man in the street in the region and motivate him to take part in the decision making process.

These stations will combine mass and individual communication. The citizen will hear himself on them, since they will ultimately express his problems, his hopes and his pains, and propel him toward a better future. They will provide an opportunity to play up the talent available in the rural areas in various spheres of life. The talents can glitter on the regional stations and even surpass those of the main station in Cairo in the areas of ideas, literature, art, economy, law, agriculture, industry, etc. In fact, there will be competition between these stations and the mother station in discovering new talents and in the various aspects of the arts which they will present to the masses.

Studies prepared in this regard suggest the construction of a major regional station to be called "Central Delta Regional Station." Its range would cover the governorates of al-Sharhiyah, al-Minufiyah, Kafr al-Shaykh, al-Buhayrah, al-Daqahliyah and Damietta. It would carry 18 hours of programs daily. These would be distributed equally among the 6 governorates, so that each governorate would have 3 hours of programs dedicated to it. These special programs would be channeled through the Central Radio Coordination Office whose experts would set the proper timing of each governorate's programs.

Studies and reports also suggest the possibility of combining two governorates for coverage by 1 station. The two governorates would join hands in drawing up a joint plan for programs beamed to them. This idea would apply to adjacent states. Each station would still have 3 hours of special programs dedicated to it.

The plan also contemplates construction of a major regional radio station in Lower Egypt which would serve the 5 governorates of al-Jizah, al-Sharqiyah, al-Qalyubiyah, Bani Suwayf, and al-Fayyum [al-Jizah, Bani Suwayf and al-Fayyum are in Upper Egypt]. It would carry 15 hours of programs which would be distributed so that each governorate would have its share of 3 hours of special programs.

The plan leaves it up to the governors to decide that each governorate should have its own station, if they do not favor the idea of a major station. The chairman of the board of directors says: "In this regard,

the Radio and Television System does not at all object to the idea of establishing a station in each governorate, if the governor provides all necessary facilities to do so to the system. This is especially so, since our objective is that each governorate should have a station, if possible."

The plan seeks to establish seven regional stations in Upper Egypt in al-Minya, Asyut, Sawhaj, Qina, Naja' Hammadi, and Aswan and New Valley. The latter will serve al-Khariyah, al-Dakhihah and al-Bahriyah regions and Baris. There will also be two major stations, the first in the Red Sea governorate, serving the areas of al-Ghardaqah, al-Qusayr and Ra's Gharib, and the second in al-'Arish, serving the Sinai areas.

The Link With the Mother Station

With regard to the link between the regional stations and the mother station in Cairo, Safwat al-Sharif says: The plan is for a link between these stations and Cairo, so that there will be no isolation after construction of these stations. In fact, the plan calls for a sort of tie-in through allocation by the mother station of certain programs for broadcasting by the regional stations. By the same token, some regional programs will be carried by Cairo. In fact, all these stations can join the wavelength of the mother station in Cairo on national occasions or for important events. Moreover, the regional stations will have to avail themselves of the expertise of the mother station with regard to policies, planning, operations, and the social news portion of news programs.

The power of the central station in Cairo will be increased on all wavelengths so as to reach the various regions, so that their people can learn the ideas of Cairo, and so that regional station workers may be able to adapt ideas they like into their own broadcasts. The station of the people will be the central station with regard to the regional stations, because its programs address themselves to all segments of society in the various provinces of Egypt.

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LM ERICSSON, PHILIPS SHARE IN PHONE NET CONTRACT

Stockholm DAGENS NYHETER in Swedish 22 Aug 80 p 29

[Report by Mats Hollgren]

[Text] LM Ericsson's big telecommunications project in Saudi Arabia has now grown to where the orders amount to nearly 17 billion kronor. When the first order was received in the beginning of 1978 the amount was about 9 billion kronor.

"We are counting on the amount of the orders increasing still further during the next few years," Håkan Ledin, vice manager of LM Ericsson, tells DAGENS NYHETER.

It is LM [Ericsson] and the Dutch firm of Philips that, together, have gotten that giant order to expand and modernize the telephone net of the oil country Saudi Arabia.

There are several explanations for the increase in the amount of the order. After the original order was given, final planning showed that the costs had risen by a good 3.5 billion kronor.

Early in the summer of 1980, however, there was an increase in the number of lines ordered from 500,000 to 770,000. That increased the amount by nearly 2.5 billion kronor.

The work in Saudi Arabia has gone according to plan, and in certain sectors deliveries are ahead of schedule. In May of this year Saudi Arabia adopted a new, very comprehensive 5-year plan. In the plan nearly 30 billion kronor was reserved for telecommunications.

"A great deal of all that will go to Philips, but a bit of it should come to us, too," says Håkan Ledin. The increase in the Saudi Arabian orders does not mean that LM Ericsson plans extensive changes and concentration on manufacture in Sweden. As DAGENS NYHETER reported earlier, at LM they are planning to cut down by about 1,800 by 2,000 jobs during the next 3 years.

INTER-AFRICAN AFFAIRS

BRIEFS

'PANA' POOL OPERATIONS--Dar es Salaam, 22 Sep (AFP)--The proposed PAN-
AFRICAN NEWS AGENCY (PANA) will start operations next January with an
East African news pool centered in Khartoum, the Tanzanian news agency,
SHIHATA, said Sunday. It quoted a technical official of the SUDANESE
NEWS AGENCY (SUNA) as saying SUNA would initially supply the necessary
telecommunications equipment and teletype operators to the pool's 11
member countries--Sudan, Kenya, Ethiopia, Somalia, Uganda, Djibouti,
Seychelles, Madagascar, Mauritius, the Comoros and Tanzania. The offi-
cial, Mohamed Othman, said PANA would begin operating continent-wide by
the middle of next year. [Text] [AB220713 Paris AFP in English 0642 GMT
22 Sep 80]

CONGO-ZAIRE MICROWAVE LINK--Comrade Florent Tsiba, member of the Political
Bureau and minister of information, posts and telecommunications, last
night returned home from Kinshasa, Zaire, following a 24-hour visit during
which he had discussions with his Zairian counterpart. The following final
communique was published in Kinshasa yesterday at the end of Comrade Tsiba's
visit. On 11 September 1980, the Zairian state commissioner for posts and
telecommunications, Citizen Tokwaulu Bolamba, and the Congolese minister of
information, posts and telecommunications, Comrade Florent Tsiba, agreed
on the establishment of a microwave telecommunications link between the
Republic of Zaire and the People's Republic of the Congo as well as on the
maintenance of this telecommunications system. The inauguration of this
link between the two republics [few words indistinct] will take place on
2 October 1980. [Excerpt] [AB161452 Brazzaville Domestic Service in French
1245 GMT 12 Sep 80]

CSO: 5500

BRIEFS

UNESCO DEVELOPS BENIN PRESS AGENCY--Cotonou, 16 Sep (AFP)--Reports from Cotonou indicate that a mission of UNESCO experts led by Mr Claude Onombo of the Communication System Development Division visited Benin from 12 to 15 September. The mission, which includes Mr Anim, a UNESCO expert and former director of the Ghanaian Press Agency and Mr Lieser, communications engineer at the telecommunications office of the Federal Republic of Germany, came, within the framework of a vast joint UNESCO-FRG project, to carry out an on-the-spot study of the possibilities of developing the Benin Press Agency (ABP). According to Mr Onombo, the project will have to begin in January 1981, for the funds are already available. It is estimated that UNESCO will help the ABP train its personnel for a period of 3 years in technical and editorial sectors. It will also supply additional material for the agency's equipment. The mission, which had earlier on visited Congo, left Monday evening for Mali. [Text] [AB170616 Paris AFP in French 1830 GMT 16 Sep 80]

CSO: 5500

SATELLITE TO LINK COUNTRY WITH REST OF WORLD

Kampala UGANDA TIMES In English 29 Aug 80 p 4

[Article by Eva Lubwama]

[Text] Uganda will be linked direct to all parts of the world by telephone, telex and television through Mpona Earth Satellite now in its final stage.

Situated near Mukono about 14 miles from Kampala, the final figure of costs is anywhere between 140m/- and 150/- million shillings.

Communicating through the Atlantic Ocean, it is one of the most modern structures in Africa for telecommunications.

During the massive structure, project manager Mr. T. Satu said that the electric construction is done by Nippon Electric Company from Japan which supplied the electrical experts and is responsible for all the technical work.

Concrete construction is done by Roko Construction who import in everything needed for work except sand and stone.

The disc weighs 300 tons of steel and is supported on a base of 400 tons of cement and stone. The disc itself costs one-third of the total cost.

It will be rotating through 270 degrees vertically and a much smaller degree horizontally with the help of bull-gears and motors.

It is expected to be ready by December. The chief engineer Uganda Posts and Telecommunications, Mr S.E.R. Mbaabali said that it would link Uganda to all parts of the world through telephone, telex and television.

An international exchange has already been brought in and with another cost of 1m/- shillings there will be direct international call subscriber's facilities.

The satellite to have a total capacity of about 150 circuits compared to the present six we are using through Kenya.

There would be five big channels to USA, Britain, Germany, Italy and France and a sixth one for television. London would have 11 circuits.

The whole structure operations are highly automated. It would require only 18 engineers to man it through Video systems and detectors which can display any failure instantly.

In case electricity power from the Uganda Electric Board is cut off, there are two automatic generators with power of 300 kilo volts each. They switch themselves on instantly when there is a power failure. A telephone conversation or television picture cannot be interrupted at all.

Already 16 Ugandans have been trained in Japan to man the satellite.

Mbaabali said that the satellite will be generating about 200m/- shillings a month from internal services while the telex is also expected to be bringing in another 200m/- shillings a month. International calls would be generating foreign exchange.

The work began in 1977 when it was found out that over dependence on Kenya was unhealthy for Uganda.

It is ideally situated not far and not very near the city. It is near a main road where electricity and water are available, plus a vast area for development and food.

Among the facilities going to be provided for workers on the satellite are housing ranging from simple one-roomed houses to top executive houses. There will be a nursery school, a restaurant, clubhouse, guest rooms, a grocery and a football pitch. Expatriates are to be housed in self-contained flats estimated to cost 5m/- shillings.

The satellite in Arua is to be moved to Kampala to be used as a live station for training purposes. It would be the only one of its kind in Africa and it is to be open to all African countries for training their personnel.

The one in Kisumu will be turned into an international one through a contract with the United Nations.

'REUTERS ' TO TRAIN 'ZANA' STAFF MEMBERS

Lusaka TIMES OF ZAMBIA in English 8 Sep 80 p 2

[Text] REUTERS news service has offered to train three Zambia News Agency (ZANA) staff at Nairobi Institute, Information and Broadcasting Minister, Mr Mark Tambatamba, announced in Lusaka yesterday.

He was speaking at Lusaka International Airport on arrival from West Germany where he and Elections and Publicity Sub-Committee chairman, Mr Bob Litana, recently attended a meeting at the invitation of the Frederick Neuman Foundation.

Mr Litana, is expected to arrive today.

Mr Tambatamba said the meeting was attended by countries where the foundation was carrying out projects, such as the establishment of journalism school in Zambia.

After the West German meeting, he went to London where he had "useful" discussions with REUTERS officials.

REUTERS had promised him two more places for short courses before the end of the year for working journalists from ZANA, he said.

The courses would go a long way in improving the performance of ZANA staff, Mr Tambatamba said.

"But this does not mean that training will be restricted to ZANA staff only. I hope that when we approach REUTERS again next year, they will offer us more places to include other reporters from the TIMES OF ZAMBIA and ZAMBIA DAILY MAIL," he said.

In May, ZANA and the German Democratic Republic news agency ADN signed an agreement for the exchange of news between them.

CSD: 4420

SATELLITE COMMUNICATIONS PLAN REPORTED

Salisbury THE HERALD in English 11 Sep 80 p 3

[Text]

THE Government had plans to set up an Earth station that would link Zimbabwe with other nations via a satellite, the Deputy Minister of Posts and Telecommunications, Roads and Road Traffic, Dr Naomi Ndwandwe said yesterday.

She said in an interview that a number of companies in Japan, West Germany and other countries had already been approached to help establish the station.

The move would boost the country's communications links with the rest of the world and reduce Zimbabwe's dependence on South Africa.

"It will also mean that communications services within the country—radio, television, telephones and telex — would be greatly improved," said Dr Ndwandwe.

The Government had embarked on a massive programme to grade more than 4 000 km of Zimbabwe's roads in the rural areas and her Ministry had 15 vacancies for civil engineers.

There was also a shortage of 21 vehicle inspectors — a situation which made the Government's task of ensuring that all cars were roadworthy "very difficult".

As part of the Government's policy of black advancement, her Ministry was searching for Africans who would fill these posts and others at senior level.

She attacked the living conditions of black workers, mainly those who serviced roads, saying they were degrading, as people were put up in "cages . . . very little tin houses".

"We have asked our permanent secretary to look into this issue very quickly and we expect that he will be reporting to us without delay."

There was also an urgent need to improve the health services for these employees, some of whom stayed in forests where there were no clinics or any such facilities.

The Minister stressed the importance of creating a sound communications and transport system throughout the country if the fruits of development were to reach all Zimbabweans.

BRIEFS

SATELLITE STATION INAUGURATED--This afternoon, President Kiprianou inaugurated the Makarios satellite earth station at Kakoratzia [near the 23d milestone on the Nicosia-Limassol highway]. In his speech, Kiprianou expressed particular pleasure at having the opportunity to inaugurate and officially open the station and congratulated the Cyprus Telecommunications Authority [CYTA] for its continuous efforts to improve telecommunications. He said: Our outstanding people have proved that, even under adverse conditions, they are struggling for progress. Kiprianou stressed that it was in the interest of all people and the state in general for the struggle to continue, no matter how difficult it might be, because nobody knew how long it might take for a lasting and just solution of the Cypriot problem. The president of the republic reiterated: We are not prepared to sacrifice substance for an early solution of the problem, endorse the faits accomplis or sell out our people's rights. He said: We are passing through difficult times; therefore, let us not add the division of our people to this. Mr Kiprianou stressed that at such critical moments, the people's concord constituted the most primary prerequisite for the success of the struggle against unacceptable solutions. The president of the republic concluded: I call on all people to continue the struggle united and confident that we shall save our country and hand over to the coming generations a free Cyprus in which all its inhabitants will live united without Green Lines and Attilas. [Excerpt] [NC121842 Nicosia Domestic Service in Greek 1630 GMT 12 Sep 80]

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